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PATENT APPLICATION

ATTORNEY DOCKET NO. ___200308346-1___

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):   Lord et al,

Application No.: 09/755,740

Filing Date: Jan. 5, 2001

Title: SYSTEM FOR DISPLAYING A HIERARCHICAL DIRECTORY

Confirmation No.: 3744

Examiner: Nguyen, Le V.

Group Art Unit: 2174

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Commissioner For Patents
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BOARD OF PATENT APPEALS & INTERFERENCES
APR 16 2004

Sir:

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith in *triplicate* is the Appeal Brief in this application with respect to the Notice of Appeal filed on ___Feb. 23, 2004___ .

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

    ( ) one month $110.00
    ( ) two months $420.00
    ( ) three months $950.00
    ( ) four months $1480.00

    ( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of ___$330.00___ . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

( ) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit:_____
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Number of pages:

Typed Name: *Michelle G. Trujillo*

Signature: *Michelle Trujillo*

Rev 10/03 (Aplbrief)

Respectfully submitted,

Lord et al.

By
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#9
1of3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)	
)	
Lord, et al.)	Group Art Unit: 2174
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Serial No.: 09/755,740)	Examiner: Nguyen, Le V.
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For: SYSTEM FOR DISPLAYING A	APR 2 1 2004
HIERARCHICAL DIRECTORY	Technology Center 2100

APPEAL BRIEF

To: Commissioner for Patents
       P.O. Box 1450
       Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in response to the final rejections of the claims mailed

December 15, 2003. A Notice of Appeal was filed on February 23, 2004.

REAL PARTY IN INTEREST

The assignee of the entire right, title, and interest in the patent application is Hewlett-

Packard Development Company.

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RELATED APPEALS AND INTERFERENCES

There are currently no related appeals of other United States patent applications known to Appellants, Appellants' legal representative, or the assignee that will directly affect, or be directly affected by, or have a bearing on, the Board's decision. There are currently no related interferences known to Appellants, Appellants' legal representative, or the assignee which will directly affect, or be directly affected by, or have a bearing on, the Board's decision.

STATUS OF CLAIMS

Claims 1-27 are pending in the application. In the Office Action mailed December 15, 2003, claims 1-27 were finally rejected under 35 U.S.C. §102 (e) as being anticipated by U.S. Patent No. 6,380,957 to Banning ("the '957 patent).

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection.

SUMMARY OF INVENTION

The invention is summarized below based on the independent claims 1 and 20 with reference numerals and reference to the specification and drawings:

A system 100 for transferring information in a computer network from a server 102 to a client computer 101, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device 110 connected to the client computer 101 in the form of a navigable tree having expandable nodes, the viewable subset being visible in a navigation pane 106 on the display device 110, the system 100 comprising: a

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tree descriptor array (see, at least page 5, lines 14-16; page 11, line 1 through page 12, line 19) comprising information describing each of the objects to be displayed in the navigation pane 106; and a tree descriptor string (see, at least page 5, lines 10-14; page 12, line 20 through page 14, Table 4) comprising information describing a hierarchical structure of expanded nodes in the tree; wherein the tree descriptor array and the tree descriptor string are sent from the server to the client computer (see, at least page 6, line 31 through page 5, line 5; page 7, line 30 through page 8, line 3; Fig. 3, reference 305); and wherein the tree descriptor string comprises a list of only those said expandable nodes which are to be expanded and displayed on the display device (see, at least page 12, line 20 through page 13, line 10).

A method for transferring information in a computer network from a server 102 to a client computer 101, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device 110 connected to the client computer 101 in the form of a navigable tree having expandable nodes, the viewable subset being visible in a navigation pane 106 on the display device 110, the method comprising the steps of: sending, from the client computer to the server, tree descriptor information describing a hierarchical structure of the nodes that are to be expanded (see, at least page 6, line 31 through page 5, line 5; page 7, line 30 through page 8, line 3; Fig. 3. reference 305); determining a tree segment to be displayed in the navigation pane in response to the tree descriptor information received from the client computer (see, at least Fig. 3; page 15, line 28 through page 20, line 30); and sending, from the server to the client computer, a list of each of the objects in the tree segment to be displayed, and information describing each of the objects to be displayed (see, at least page 6, line 31 through page 5. line 5; page 7. line 30 through page 8, line 3; Fig. 3, reference 305); wherein said tree descriptor information comprises a list of only the nodes that

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are to be expanded (see, at least page 12, line 20 through page 13, line 10).

ISSUE

Whether claims 1-27 are anticipated under 35 U.S.C. §102(e) by the '957 patent.

GROUPING OF CLAIMS

Claims 1, 13, and 27 stand or fall as a group.

Claims 20 and 26 stand or fall as a group.

Claims 2 and 14 stand or fall as a group, but are separately patentable from the remaining claims.

Claims 3 and 15 stand or fall as a group, but are separately patentable from the remaining claims.

Claims 4, 16, and 21 stand or fall as a group, but are separately patentable from the remaining claims.

Claims 5, 17, and 22 stand or fall with claims 4, 16, and 21.

Claims 6, 18, and 23 stand or fall as a group, but are separately patentable from the remaining claims.

Claims 7, 19, and 24 stand or fall as a group, but are separately patentable from the remaining claims.

Claims 8 and 25 stand or fall with claims 7 and 23, respectively.

Claims 9, 10, 11, and 12 stand or fall with claim 1.

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ARGUMENT

Legal Standard

The standard for lack of novelty, that is, for "anticipation," under 35 U.S.C. §102 is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). Invalidity for anticipation requires that all of the elements and limitations of the claims be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991). Every element of the claimed invention must be literally present, arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The identical invention must be shown in as complete detail as is contained in the patent claim. MPEP §2131 (8th Ed. 2003). Furthermore, functional language, preambles, and language in "whereby," "thereby," and "adapted to" clauses cannot be disregarded. *Pac-Tec, Inc. v. Amerace Corp.*, 14 USPQ2d 1871 (Fed. Cir. 1990).

"It is by now well settled that the burden of establishing a *prima facie* case of anticipation resides with the Patent and Trademark Office." *Ex parte Skinner*, 2 USPQ2d 1788, 1788-1789 (Bd. Pat. Int. 1986 (holding that examiner failed to establish *prima facie* case of anticipation). The examiner has "the burden of proof . . . to produce the factual basis for its rejection of an application under sections 102 or 103." *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984 (quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967). Only if that burden is met, does the burden of going forward shift to the applicant.

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Examiner's Rejection

In the first Office Action dated September 26, 2002, ("the Action") the examiner rejected claims 1-27 under 35 U.S.C. 102(e) as being anticipated by the '957 patent. In the final Office Action dated December 15, 2003, ("the final Action") the examiner again rejected claims 1-27 under 35 U.S.C. 102(e) as being anticipated by the '957 patent.

Claims 1, 13, and 27

The rejection of independent claims 1, 13, and 27 is improper at least because the '957 patent fails to disclose any of the limitations recited in independent claims 1, 13, and 27. Independent claims 1 and 13 are directed to a system for transferring information in a computer network from a server to a client computer, and independent claim 27 is directed to a method for transferring information in a computer network from a server to a client computer.

Each of independent claims 1, 13, and 27 recites "a tree descriptor array comprising information describing each of the objects to be displayed in the navigation pane" and "a tree descriptor string comprising information describing a hierarchical structure of expanded nodes in the tree . . ." In addition, each of independent claims 1, 13, and 27 recites a limitation that the tree descriptor array and the tree descriptor string are sent from the server to the client computer. The '957 patent fails to disclose either a tree descriptor array or a tree descriptor string as recited in these claims, or sending a tree descriptor string from a server computer to a client computer.

In the final Action the Examiner maintained the rejection of claims 1, 13, and 27 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. To support this rejection, the Examiner cited column 5, line 5 through column 6, line 24; column 7, line 37 through column 8, line 6, Figs. 4B-4C; and column 7, lines 14-25. In addition, the Examiner supported the rejection with

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the following assertion:

> a representation of TDA and TDS and rendered in pane 104 as a tree view, displaying nodes which are to be expanded and displayed wherein TDS comprises a list of only those nodes which are to be expanded and displayed by such methods as limiting the amount of expansion to a certain number of siblings.

This rejection is improper. Anticipation under 35 U.S.C. §102 requires that *each and every element* of the claim be set forth in the manner recited in the claim in a single prior art reference. (See. MPEP 2131). Contrary to the Examiner's assertion, nothing in the cited text discloses a tree descriptor array and a tree descriptor string that are sent from a server to a client. Pane 104 in Figs. 4A-4B is a simple schematic illustration of a directory tree. The '957 patent provides no description whatsoever regarding data structures underlying the tree structure, much less a TDA or a TDS as recited in the claims, or how the tree is constructed. Further, the '957 provides no description whatsoever of forwarding information from a server computer to a client computer, much less forwarding a TDA or a TDS, as recited in the claims. Accordingly, the '957 patent cannot anticipate independent claims 1, 13, and 27.

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<u>Claim 20</u>

The rejection of independent claim 20 is improper at least because the '957 patent fails to disclose any of the limitations recited in independent claim 20. Independent claim 20 is directed to a method for transferring information in a computer network from a server to a client computer, and recites:

> sending, from the client computer to the server, tree descriptor information describing a hierarchical structure of the nodes that are to be expanded;
> determining a tree segment to be displayed in the navigation pane in response to the tree descriptor information received from the client computer; and
> sending, from the server to the client computer, a list of each of the objects in the tree segment to be displayed, and information describing each of the objects to be displayed;
> wherein said tree descriptor information comprises a list of only the nodes that are to be expanded.

In the final Action the Examiner maintained the rejection of claim 20 under 35 U.S.C. §102(e) as being anticipated by the '957 patent, referencing the same support and using the same arguments applied against claims 1, 13, and 27.

This rejection is improper. Anticipation under 35 U.S.C. §102 requires that *each and every element* of the claim be set forth in the manner recited in the claim in a single prior art reference. (See, MPEP 2131). As noted above, pane 104 in Figs. 4A-4B is a simple schematic illustration of a directory tree. Contrary to the Examiner's assertion, nothing in the cited text discloses sending, from a client computer to a server, tree descriptor information describing a hierarchical structure of the nodes that are to be expanded, much less wherein the tree descriptor information comprises a list of only the nodes that are to be expanded. Further, the '957 patent provides no description whatsoever related to determining a tree segment to be displayed in the navigation pane in response to the tree descriptor information received from the client computer, as recited in claim 20, or sending, from the server to the client computer, a list of each of the

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objects in the tree segment to be displayed, and information describing each of the objects to be displayed, as recited in claim 20. Accordingly, the '957 patent cannot anticipate independent claim 20.

Claims 2 and 14

The rejection of dependent claims 2 and 14 is improper at least because the '957 patent fails to disclose any of the limitations recited in dependent claims 2 and 14. Each of dependent claims 2 and 14 recites:

> a managed object list comprising an entry for each of a plurality of managed objects in the navigable tree; and
> a view list comprising a plurality of indicia of object data records, each of which represents a child of one of the managed objects corresponding to an entry in the managed object list;
> wherein each said entry in the managed object list comprises indicia of an entry in the view list

In the final Action the Examiner maintained the rejection of claims 2 and 14 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. To support this rejection, the Examiner cited Fig. 4B, and supported the rejection with the following assertion:

> Network 112 contains more than one managed objects with a list of objects specific to a managed object such as "Fs1", "Fs3" and "Share" wherein an identifier for each node, parent or child is inherent for referencing purposes.

This rejection is improper. Initially, the rejection fails to set forth clearly the manner in which the '957 patent allegedly discloses the various elements recited in claims 2 and 14. Further, pane 104 in Figs. 4A-4B is a simple schematic illustration of a directory tree. Contrary to the Examiner's assertion, nothing in Fig. 4B discloses any of the limitations recited in claims 2 and 14. Accordingly, the '957 patent cannot anticipate independent claims 2 and 14.

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Claims 3 and 15

The rejection of dependent claims 3 and 15 is improper at least because the '957 patent fails to disclose any of the limitations recited in dependent claims 3 and 15. Each of dependent claims 3 and 15 recites:

> a Universal Identifier for the object to which a given said one of the object data records corresponds; and
> a Universal Identifier for the parent of the object to which a given said one of the object data records corresponds.

In the final Action the Examiner maintained the rejection of claims 3 and 15 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. The Examiner supported this rejections using the same disclosure and assertion used to reject claims 2 and 14.

This rejection is improper. Initially, the rejection fails to set forth clearly the manner in which the '957 patent allegedly discloses the various elements recited in claims 3 and 15. Further, contrary to the Examiner's assertion, nothing in Fig. 4B discloses any of the limitations recited in claims 3 and 15.

Finally, to the extent that the Examiner's comments indicate that the Examiner considers claims 3 and 15 anticipated by inherency, Applicants assert that the record fails to provide any factual support for a finding of anticipation by inherency. To prove anticipation by inherency, the Examiner must establish that the system disclosed in the '957 patent *necessarily* includes the structure recited in claims 3 and 15. Continental Can Co. U.S.A. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). There is no such showing on the record. The bald assertion that "an identifier for each node, parent or child, is inherent for referencing purposes" is inadequate to support a finding of anticipation by inherency. Accordingly, the '957 patent cannot anticipate independent claims 3 and 15.

Claims 4, 16, and 21

The rejection of dependent claims 4, 16, and 21 is improper at least because the '957 patent fails to disclose any of the limitations recited in dependent claims 4, 16, and 21. Each of dependent claims 4, 16, and 21 recites:

> a Universal Identifier of the object;
> a first index indicating the relative position of the object in the navigable tree. at which a tree segment starts; and
> a second index indicating the relative tree position of the object from its managed object.

In the final Action the Examiner maintained the rejection of claims 4, 16, and 21 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. To support this rejection, the Examiner cited Fig. 4B, and supported the rejection with the following assertion:

> Rendered in pane 104 is a view of a tree with objects 112, 114 and Fs1 being in a position relative to each other and reflecting the relationship relative to each other wherein the index of each object is inherent for addressing purposes and wherein in an identifier for each node, parent or child, is inherent for referencing purposes.

This rejection is improper. Initially, the rejection fails to set forth clearly the manner in which the '957 patent allegedly discloses the various elements recited in claims 4, 16, and 21. Further, contrary to the Examiner's assertion, nothing in Fig. 4B discloses any of the limitations recited in claims 4, 16, and 21.

Finally, to the extent that the Examiner's comments indicate that the Examiner considers claims 3 and 15 anticipated by inherency, Applicants assert that the record fails to provide any factual support for a finding of anticipation by inherency. To prove anticipation by inherency, the Examiner must establish that the system disclosed in the '957 patent *necessarily* includes the structure recited in claims 4, 16, and 21. Continental Can Co. U.S.A. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). There is no such showing on the record. The bald assertion that

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"the index of each object is inherent for addressing purposes and wherein in an identifier for each node, parent or child. is inherent for referencing purposes" is inadequate to support a finding of anticipation by inherency. Accordingly, the '957 patent cannot anticipate independent claims 4, 16, and 21.

Claims 6, 18, and 23

The rejection of dependent claims 6, 18, and 23 is improper at least because the '957 patent fails to disclose the limitations recited in dependent claims 6, 18, and 23. Each of dependent claims 6, 18, and 23 recites that:

> the tree descriptor string further comprises a representation of the hierarchical structure of open containers in the part of the tree that is being displayed.

In the final Action the Examiner maintained the rejection of claims 6, 18, and 23 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. To support this rejection, the Examiner cited column 2, lines 6-24 and Figs. 4B-4C, and supported the rejection with the following assertion:

> A representation of TDA. rendered in pane 104, as a view of a tree, with indicators '+' and '-'.

This rejection is improper. Initially, the rejection fails to set forth clearly the manner in which the '957 patent allegedly discloses the various elements recited in claims 6, 18, and 23. Further, contrary to the Examiner's assertion. nothing in column 2, lines 6-24 or Figs. 4B-4C discloses the limitations recited in claims 6, 18, and 23. Accordingly. the '957 patent cannot anticipate independent claims 6, 18, and 23.

Claims 7, 19, and 24

The rejection of dependent claims 7, 19, and 24 is improper at least because the '957 patent fails to disclose the limitations recited in dependent claims 7, 19, and 24. Each of dependent claims 7, 19, and 24 recites that:

> the tree descriptor string further comprises indicia of the location of a cursor on the display device.

In the final Action the Examiner maintained the rejection of claims 7, 19, and 24 under 35 U.S.C. §102(e) as being anticipated by the '957 patent. To support this rejection, the Examiner cited column 4, lines 23-24. This text reads as follows:

> The pointing device 84 may be used to move a pointer or cursor on display screen 30.

This rejection is improper. Initially, the rejection fails to set forth clearly the manner in which the '957 patent allegedly discloses the various elements recited in claims 7, 19, and 24. Further, contrary to the Examiner's assertion, nothing in column 4, lines 23-24 discloses a tree descriptor string that comprises indicia of the location of a cursor on the display device, as recited in claims 7, 19, and 24. Accordingly, the '957 patent cannot anticipate independent claims 7, 19, and 24.

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CONCLUSION

The '957 patent fails to disclose each limitation of appellants' claims. Therefore, the '957

patent cannot be used to establish the required *prima-facie* case of anticipation under 35 U.S.C.

§102(e). Appellants urge the Board to reverse the Examiner's rejections under 35 U.S.C. §102(c)

of claims 1-27.

Respectfully submitted,

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APPENDIX A

Claims

1.   A system for transferring information in a computer network from a server to a client computer, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device connected to the client computer in the form of a navigable tree having expandable nodes, the viewable subset being visible in a navigation pane on the display device, the system comprising:

a tree descriptor array comprising information describing each of the objects to be displayed in the navigation pane; and

a tree descriptor string comprising information describing a hierarchical structure of expanded nodes in the tree;

wherein the tree descriptor array and the tree descriptor string are sent from the server to the client computer; and

wherein the tree descriptor string comprises a list of only those said expandable nodes which are to be expanded and displayed on the display device.

2.   The system of claim 1, further including:

a managed object list comprising an entry for each of a plurality of managed objects in the navigable tree; and

a view list comprising a plurality of indicia of object data records, each of which represents a child of one of the managed objects corresponding to an entry in the managed object list;

wherein each said entry in the managed object list comprises indicia of an entry in the view list.

3.   The system of claim 2, wherein each one of the object data records include information comprising:

a Universal Identifier for the object to which a given said one of the object data records corresponds; and

a Universal Identifier for the parent of the object to which a given said one of the object data records corresponds.

4.   The system of claim 1, wherein the tree descriptor array comprises information for each object in the subset of the objects to be displayed, including:

a Universal Identifier of the object;

a first index indicating the relative position of the object in the navigable tree, at which a tree segment starts; and

a second index indicating the relative tree position of the object from its managed object.

5.   The system of claim 4, wherein the tree descriptor array further comprises:

a first string indicating whether the object is expandable; and

a second string indicating whether the object is presently expanded.

6.   The system of claim 1, wherein the tree descriptor string further comprises a representation of the hierarchical structure of open containers in the part of the tree that is being displayed.

7.   The system of claim 6, wherein the tree descriptor string further comprises indicia of the location of a cursor on the display device.

8.   The system of claim 7, wherein the tree descriptor string further comprises indicia of the state of nodes in the displayed segment of the navigation tree including whether a node comprising a folder is open.

9.   The system of claim 1, wherein the client computer uses information in the tree descriptor string to render a view that includes one expanded node of said expandable nodes.

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10.   The system of claim 9, wherein the client computer also uses information in the tree descriptor array to render a view that includes said nodes which are to be expanded.

11.   The system of claim 1, wherein, in response to a user of the client computer clicking on one of said expandable nodes, the client computer sends information via the tree descriptor string to the server identifying the node to be expanded.

12.   The system of claim 1, wherein the list contained in the tree descriptor string contains a list of those said nodes which are to be expanded and displayed on the display device.

13.   A system for transferring information in a computer network from a server to a client computer, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device connected to the client computer in the form of a navigable tree having expandable nodes represented by container objects, the viewable subset being visible in a navigation pane on the display device, the system comprising:

        a tree descriptor array comprising information describing each of the objects to be displayed in the navigation pane; and

        a tree descriptor string comprising information describing a hierarchical structure of said container objects that are open:

        wherein the tree descriptor array and the tree descriptor string are sent from the server to the client computer; and

        wherein the tree descriptor string contains a list of only those said container objects which have been opened.

14.   The system of claim 13, further including:

        a managed object list comprising an entry for each of a plurality of managed objects in the navigable tree; and

        a view list comprising a plurality of indicia of object data records, each of which represents a child of one of the managed objects corresponding to an entry in the managed object list;

        wherein each said entry in the managed object list comprises indicia of an entry in the view list.

15.   The system of claim 14, wherein each one of the object data records include information comprising:

a Universal Identifier for the object to which a given said one of the object data records corresponds; and

a Universal Identifier for the parent of the object to which a given said one of the object data records corresponds.

16.   The system of claim 13, wherein the tree descriptor array comprises information for each object in the subset of the objects to be displayed, including:

a Universal Identifier of the object;

a first index indicating the relative position of the object in the navigable tree, at which a tree segment starts; and

a second index indicating the relative tree position of the object from its managed object.

17.   The system of claim 16, wherein the tree descriptor array further comprises:

a first string indicating whether the object is expandable; and

a second string indicating whether the object is presently expanded.

18.   The system of claim 13, wherein the tree descriptor string further comprises a representation of the hierarchical structure of open containers in the part of the tree that is being displayed.

19.   The system of claim 18. wherein the tree descriptor string further comprises indicia of the location of a cursor on the display device.

20.   A method for transferring information in a computer network from a server to a client computer, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device connected to the client computer in the form of a navigable tree having expandable nodes, the viewable subset being visible in a navigation pane on the display device, the method comprising the steps of:

sending, from the client computer to the server, tree descriptor information describing a hierarchical structure of the nodes that are to be expanded;

determining a tree segment to be displayed in the navigation pane in response to the tree descriptor information received from the client computer; and

sending, from the server to the client computer, a list of each of the objects in the tree segment to be displayed, and information describing each of the objects to be displayed;

wherein said tree descriptor information comprises a list of only the nodes that are to be expanded.

21.   The method of claim 20, wherein said information describing each of the objects to be displayed comprises information including:

a Universal Identifier of the object;

a first index indicating the relative position of the object in the navigable tree, at which a tree segment starts; and

a second index indicating the relative tree position of the object from its managed object.

22.   The system of claim 21, wherein said information describing each of the objects to be displayed further comprises:

a first string indicating whether the object is expandable; and

a second string indicating whether the object is presently expanded.

23.   The system of claim 20, wherein the tree descriptor information further comprises a representation of the hierarchical structure of open containers in the part of the tree that is being displayed.

24.   The system of claim 23, wherein the tree descriptor information further comprises indicia of the location of a cursor on the display device.

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25.   The system of claim 24, wherein the tree descriptor information further comprises indicia of the state of nodes in the displayed segment of the navigation tree including whether a node comprising a folder is open.

26.   The method of claim 20, further comprising the step of initially sending, in response to a user of the client computer clicking on one of said expandable nodes, information identifying the node to be expanded.

27.   A method for transferring information in a computer network from a server to a client computer, the information including a plurality of hierarchically related objects, wherein a viewable subset of the objects is displayed on a display device connected to the client computer in the form of a navigable tree having expandable nodes, the viewable subset being visible in a navigation pane on the display device, the method comprising the steps of:

    generating a tree descriptor array comprising information describing each of the objects to be displayed in the navigation pane;

    generating a tree descriptor string comprising information describing a hierarchical structure of expanded nodes in the tree; and

    sending the tree descriptor array and the tree descriptor string from the server to the client computer;

    wherein the tree descriptor string comprises a list of only those said nodes which are to be expanded and displayed on the display device.

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APPENDIX B

References Relied on By Examiner in his Final Response

A copy of the following reference is attached hereto for the Board's convenience:

U.S. Patent No. 6,380,957, issued April 30, 2002, entitled "Method of Controlling View of Large Expansion Tree."